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ABSTRACT

This survey paper will deal primarily with the following two issues: (1) How to cope with the growth of the metropolitan Lima area, and the current and future stresses on its social and physical environment, and (2) How to develop, if it is possible and desirable to do so, other urban growth poles in the country which will relieve the concentration of population and economic development which is now taking place in Lima. Contents of this paper include: (1) Metropolitan Lima, (2) The Pueblas Jovenes, (3) The Character of Lima, (4) The Structure of Metropolitan Government in Lima, (5) Planning for Metropolitan Lima, (6) Oposecion Entre Lima Metropolitana y El Resto del Pais, (7) The Institutional Inventory--Planning, Research, and Training, (8) The International Roster, (9) Chimbote--A Special Case for International Assistance, and (10) Some Final Observations. [For related documents in this series, see UD 013 731-734 and 013 736-744 for surveys of specific countries. For special studies analyzing urbanization in The Third World, see UD 013 745-UD 013 748.] (Authors/SB)

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An International
Urbanization Survey Report
to the Ford Foundation

Urbanization in Peru

U.S. DEPARTMENT OF HEALTH,
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This working paper was prepared as supportive material for an International Survey of Urbanization in the developing countries, which was organized by the Ford Foundation late in 1970 and was completed late in 1972. The purpose of the Survey was to provide findings and recommendations to guide the Foundation in making informed judgments on its future participation in programs related to the urban condition in the less-developed countries.

The Survey was directed neither to perform nor to commission original research. Its work was to be reportorial, analytic, and indicative of program choices. To serve these objectives, the Survey was essentially a field operation in which the staff travelled widely in the countries where the Foundation maintains field offices and drew not only upon its own observations but upon the experience of Foundation personnel assigned to the developing countries. The staff's own field notes on phases of urbanization in specific countries were expanded into working papers both to record observations and to clarify the deductive processes and the analyses of data which were to form a demonstrable basis for the Survey's conclusions. Additional working papers were provided by Foundation personnel with a depth of field knowledge, and by consultants expert either in specific countries or in topics of special interest.

The Survey working papers and special studies were originally intended only for internal use. It became evident, however, that the body of material had values which argued for wider exposure. Accordingly, the Foundation is publishing the papers for those with special country or topical interests and for those interested in the material as a whole.

The working papers carry disclaimers appropriate to the circumstances of their preparation and to the limitations of their original purpose. The reader should not expect to find in them either the product of original research or a comprehensive treatment of the processes of urbanization in the particular country. Rather, they are occasional papers whose unity derives from their use as exemplary and illustrative material for the Survey.

But unity of form and substance is not the measure of their value. Each report and special study is an essay on some aspect of urbanization in the developing countries. In most instances, they are what a good essay should be – unmistakably personalized and therefore reflective of the insights and the convictions of informed authors.

The International Urbanization Survey

John P. Robin, Director
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ED 079454

Urbanization in Peru

by

John P. Robin and Frederick C. Terzo

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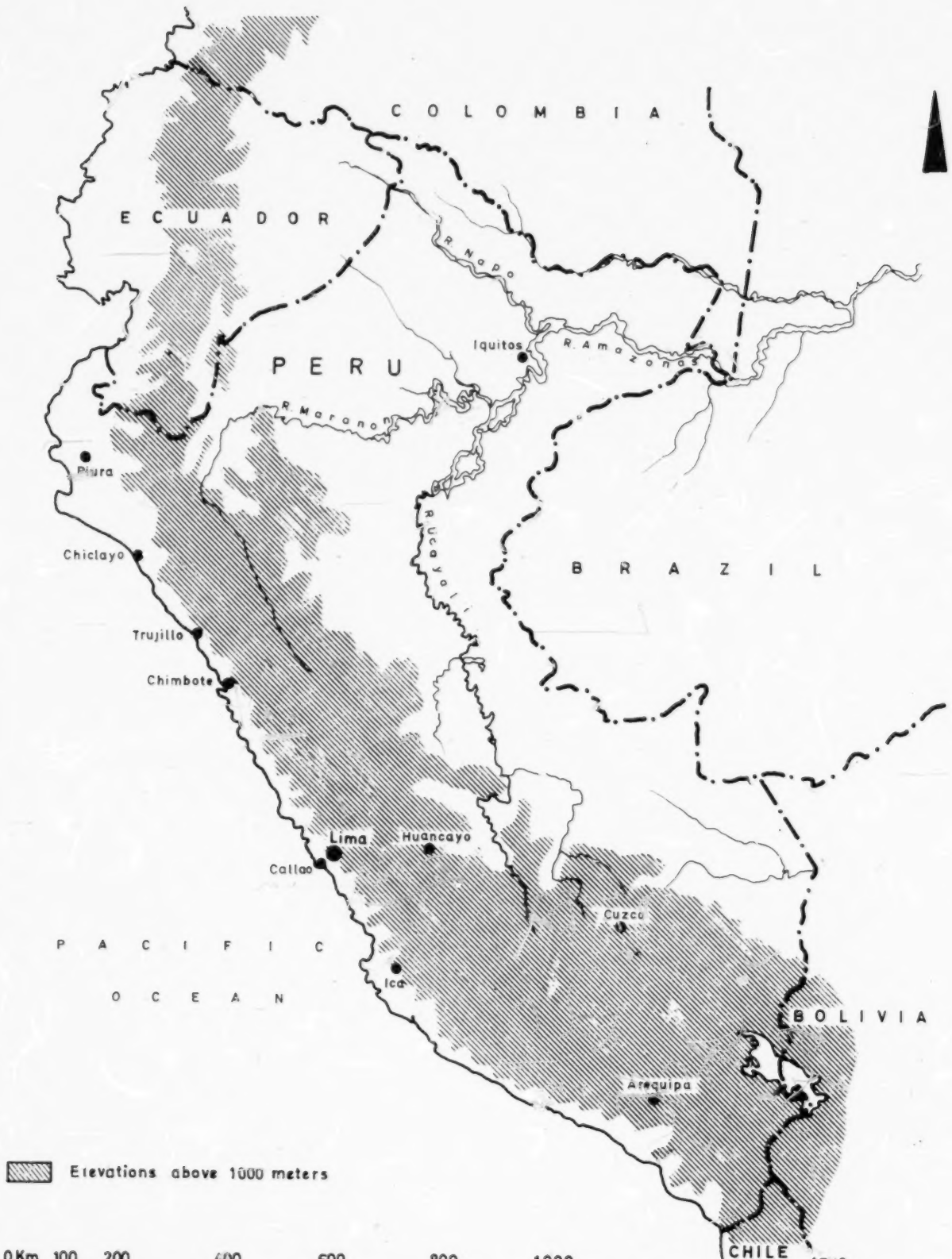
International Urbanization Survey

The Ford Foundation

C O N T E N T S

	Page
INTRODUCTION	(i)
METROPOLITAN LIMA	1
THE PUEBLAS JOVENES	5
THE CHARACTER OF LIMA	17
THE STRUCTURE OF METROPOLITAN GOVERNMENT IN LIMA	19
PLANNING FOR METROPOLITAN LIMA	22
OPOSICION ENTRE LIMA METROPOLITANA Y EL RESTO DEL PAIS	25
YOU CAN'T TELL THE PLAYERS WITHOUT THE NUMBERS	34
THE INSTITUTIONAL INVENTORY -- PLANNING, RESEARCH, AND TRAINING	40
THE INTERNATIONAL ROSTER	49
CHIMBOTE - A SPECIAL CASE FOR INTERNATIONAL ASSISTANCE	56
SOME FINAL OBSERVATIONS	62



URBANIZATION IN PERU

INTERNATIONAL URBANIZATION SURVEY

INTRODUCTION

The introduction to the excellent "Peru Data Book" prepared by the Foundation's Lima Office points out that "Peru, like any other country cannot be understood by studying statistics--no matter how many or detailed". This becomes immediately clear when the statistics which define "urban" and "rural" places in Peru are examined, not on their face or census value, but on the validity of the classification which may be variously employed. The census statistics gave Peru an "urban" population of 47.2 per cent in 1961, but they classified as urban any settlement which served as the administrative headquarters of a district, plus any other settlement which was the equivalent of such a "district" headquarters. Another method of calculation, used places of more than 2,000 population for statistical purposes; on this basis, the percentage of urban population fell to 39.4 per cent. In our judgment all of these classifications exaggerate the urban quality of Peru. The country has only one major urban center, which is metropolitan Lima. Its true percentage of genuine urban population, generously interpreted, is now almost certainly no more than 35 per cent, instead of the more than 50 per cent which would be the estimate for 1971 if the official definitions were not critically examined.

A national census will be taken in September, 1971,* and when its results are available, our own hypothesis of what they will show as the true urban-rural ratio will be subject to verification (and we hope, prove us right). Meanwhile, both visually and statistically, there can be no doubt as to the dominance of metropolitan Lima. Urban diagnosticians have borrowed a word from anatomy to describe the dominance within a country of such a single metropolitan center. They call it "macrocephaly," meaning a huge head, abnormal in relation to body size. The Republic of Peru is a large body in area, 496,000 square miles and a much smaller one in population, estimated at between thirteen and fourteen million people. The 1971 census will substitute an actual count for the estimates which must now be used, but the provincia of Lima and the provincia constitucional del Callao were estimated in the recently published (and superb) national atlas** to have a combined population of 2,459,000 people in 1966. Peru's symptoms of macrocephaly are thus evident--more than 20 per cent of its people are now thought to live in and around Lima. It is also demon-

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* The National Census is now scheduled for 1972 (ed. note).

** Atlas Historico Geografico y de Paisajes Peruanos. Lima, Instituto Nacional de Planificacion, 1970.

strated in Lima's relationship to other urban centers in Peru. The next largest city is either Arequipa, a well established traditional provincial city in the south, or Chimbote, an earthquake shaken environmental disaster in the north which has been, nevertheless, Peru's fastest growing urban center. Neither of these cities has more than 200,000 people. Lima's primacy over them is therefore of the order of about fifteen to one. There are only five other cities in Peru which will approach or exceed 100,000 population in the 1971 census. Chiclayo, Piura, and Trujillo in the north; Huancayo in the highlands, almost due east from Lima; and Cuzco, the ancient capital of the Inca empire, which is probably the oldest continuously occupied urban site of consequence in the Western Hemisphere.

Peru's urban problems are:

1. How to cope with the growth of the metropolitan Lima area, and the current and future stresses on its social and physical environment, and

2. How to develop, if it is possible and desirable to do so, other urban growth poles in the country which will relieve the concentration of population and economic development which is now taking place in Lima?

This survey paper will deal primarily with these two issues.

METROPOLITAN LIMA

In the human animal, and in all other forms except the sperm whale, macrocephaly is regarded as a pathological condition, indicating both physical and mental impairment. The urbanologists who use it do not mean it to be complimentary: they too regard its appearance as a pathological symptom. We are not sure that they are wholly right, but we are sure that once a city has assumed the dominance in a nation's life that Lima has in Peru, it is extremely difficult to avoid further concentration there, even when it is assumed that the national interest would be better served by a more diversified urban pattern. It may be possible that a program of regional development will create other urban centers and new patterns of urban settlement, but it is most unlikely that Lima will not continue to grow rapidly, and continue to require heavy investment in its infrastructure, a high degree of executive energy and technical skill in its administration, and ingenuity and humaneness in its social policies.

Lima has been an important place since Francisco Pizarro chose it as the center of administration for his conquests on January 18, 1535. It seems to have no great locational advantages except the harbor Callao. Its historic success as a city and its current national dominance appear to be the consequence of enduring political and

cultural tradition (Spanish, not Indian) and continuity, rather than of express geographic or economic rationale. It was the seat of the vice royalty for centuries and therefore the natural capital of an independent Peru. As such, it has never been challenged as the primate city of the country, although the majority of the population, now as always, lives in the Sierra (highlands) and the greater portion of the country's area is in the relatively unpeopled Selva (the trans-Andean wooded area draining to the Amazon).

But dominance is relative. In 1940, when Peru had only seven million people, the provincia of Lima had a population of 562,000, and Callao, its companion port city, had only 84,000. The percentage of Peru's people who lived in and around Lima was then about one in ten; today, as noted, one out of every five Peruvians lives in the metropolis.

Dominance is also economic. Lima is reported to have 50 per cent of the national wealth, 60 per cent of the country's manufactures, 73 per cent of its industrial wages, 55 per cent of its government employment, 90 per cent of its banking transactions, and 65 per cent of its retail trade. Callao receives 80 per cent of Peru's imports.*

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* These figures are taken from: Levinson, Jerome and Jean de Onis, The Alliance That Lost Its Way, Chicago, 1970.

The per capita income of the departamento of Lima was given as 191 per cent of the national average, while such highland departamentos as Cuzco, Puno, and Huanuco were respectively reported as having per capita incomes which were 72, 62, and 50 per cent of the national average.*

There is some statistical confusion as to exactly what constitutes metropolitan Lima. It is not the departamento (or state) which includes a considerable rural population, and excludes Callao. For this discussion, we are using the provincia (equivalent to an American county) of Lima and the provincia constitucional of Callao, combining them to give us a working base for data on what we will consider the "urbanized metropolis." There are other definitions, including the one used in the national atlas, but we believe that ours has the easiest relationship with the available firm data.** The 1961 census gave the provincia of Lima a population of 1,632,370, and Callao a population of 213,540 --a total of 1,845,000. If estimates of the decade's growth are right, the 1971 population will approach three million.

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* Statistics as cited by the Cuentas Nacionales del Peru, Banco Central de la Republica.

** Allen G. Austin came to the same conclusion in his dissertation, The Role of Municipal Government in the National Development of Peru. New York University, Graduate School of Public Administration, 1969.

Metropolitan Lima is more than give times as large as it was thirty years ago, and is thought to have added more than one million people to its population over the past ten years.

The city, to all outward appearances, has met its enormous and very rapid population growth not only without collapse but with the maintenance of many of the attributes of a city of the first class comparable to its equivalents in Latin America and the Mediterranean countries of Europe. It has also vastly extended its much studied barriadas now called pueblos jovenes. Pueblos jovenes is a new styling, consciously devised to upgrade the barriadas semantically as they are upgraded physically by the installation of primary urban services. The phrase can best be translated as "young settlements," and from 750,000 to 1,000,000 Lima's people live in them. It is impossible to find an English equivalent to barriada which is wholly accurate. Barriadas are not exactly the slums, nor shantytowns, nor squatter settlements which are English words frequently used to describe them. They are more accurately described as a process of urban settlement and accommodation for the urban dweller who is below the income level which will permit him to rent or purchase a "standard" house in a "standard" neighborhood. The barriada develops on vacant land, which may be legally or illegally occupied and which may be publicly or privately owned; it may, but more likely will not, comply with munici-

pal regulations; it may be the result of a swift invasion or a slow accretion of settlement; its structures may be of woven matting, adobe, or of substantial brick; it may have initially no urban public services and it may ultimately acquire the whole range--lighting, water supply, sewerage, paved streets, schools, and health centers.

The barriadas (various names are applied to them in the various countries of Latin America) are a characteristic urban phenomenon of the Western Hemisphere south of the Rio Grande. We believe that the Peruvian experience is an appropriate one to draw upon for examples and general conclusions. The present government of Peru, which proudly styles itself as the Revolutionary Government of the Armed Forces, has created a special agency to deal with the barriadas of Lima and twenty-four other urban clusters in the country, and it has given its new agency, the Oficina Nacional para el Desarrolo de Pueblos Jovenes, broad superdepartmental powers. As is the Latin American custom, the agency is usually referred to by its acronym, ONDEPJOV.

THE PUEBLOS JOVENES

ONDEPJOV is an independent agency of the national government, with no direct responsibilities in the Ministerio de Vivienda (Ministry of Housing), in the municipal governments

within whose jurisdiction it is operative. It is super-ministerial in concept and its functions are planning and coordination* for the barriada areas of urban Peru. ONDEPJOV was created by the present government and its director, as might be expected in a government of the armed forces, is a military man. The decree which established it on December 13, 1968, stated that ONDEPJOV is "to study, plan, propose and coordinate necessary actions at the national level with the purpose of incorporating the people of the pueblos jovenes into the socio-economic processes of the country". The considerations stated in the decree (whereas clauses in American usage) cited the objective of the Revolutionary Government to promote higher standards of living; the rapid growth of pueblos jovenes which despite "the exemplary communal vocation" of the people still contained serious environmental deficiencies that must be remedied; the need to "stimulate and orient" the initiatives already taken by the people; the need for governmental action in solving immediate problems in the pueblos jovenes and to prepare programs to meet the new ones arising with the intensified urbanization; the duty of government to

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* ONDEPJOV is now part of an agency called the Sistema Nacional de Apoyo a la Movilizacion Social (SINAMOS) which groups all the public bodies concerned with the barriadas, and will coordinate all private efforts as well. (ed. note).

resolve the rights to ownership in the land occupied by the pueblos jovenes which would be essential for future development and the security of their occupants; the need to coordinate the actions of various public bodies at the very highest level of government; and the desire of the government to secure the participation of representatives of the people of the pueblos jovenes so that the agency and its programs would respond to the "authentic needs and aspirations" of the people of the communities.

That somewhat breathless sentence conferred heavy responsibilities on the agency, which has a potential service clientele, if the decree were literally interpreted, of as many as three million Peruvians. ONDEPJOV has reduced its more immediate mission to active programs in the twenty-five cities with more than 25,000 people. Its heaviest obligation is, by the nature of things, in metropolitan Lima, where about one-third of the people are now thought to live in the barriada areas which come under the aegis of ONDEPJOV. It has divided the metropolitan city into four sectors for its own programming.

The settlement of the Lima barriadas has taken place within a generation, filling vacant desert spaces with communities now in various stages of development and giving a new shape to the metropolitan city. In terms of physical

occupation of the land, barriadas (plus some central city slums) now occupy twenty-four per cent of metropolitan Lima, extending over 3,473 hectares out of a total of 14,382 hectares of developed urban land.

The city is surprisingly dense by North American standards; it is contained within fifty-five square miles.* The settlement of the barriadas has changed the physical shape of the city from a rather compact triangle, with its points at central Lima, Callao and the residential (once a resort) distrito of Miraflores, into the shape of a star, with two major strips of settlement developing along the mountain foothills, extending north and south from the city's center. Today's barriadas are almost equal in physical extent to the whole developed area of Lima only fifteen years ago.

Lima's period of expansion, both in population and area, began in the years after World War II, when the national economy began to shift from agriculture to manufacturing and other activities associated with urban life, and when the total population increase began the cycle of growth which is still so marked in its demography. Most in-migrants

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* 1967 ONPU (National Urban Planning Office) cited by: Saravia, Alfredo. "El Gobierno Metropolitano", Concejo Provincial de Lima, Camara de Comercio, Lima, 1968, p. 93.

to the city and a portion of the city's own population were not able to acquire sufficient purchasing power to permit them to rent or buy living space in the traditional housing market. The immediate response to this failure of supply to meet need was the overcrowding of existing tenements in the central city. The next result was a breaking out to the urban fringe. The break-out created the barriadas in the form and in the numbers that are visible today--new settlements in the outskirts of the city, created by those families who could not remain in, nor even attain access to central city housing, and who saw the possibility of occupying through invasion or through illegal subdivision vacant land that was close enough to the existing city to provide them with living space which they could utilize without loss of the city's employment opportunities. Such settlement by invasion was not new in Lima (some instances can be traced back to colonial days) but in numbers and extent it became all but revolutionary in character during the 1950s. In 1955, the barriada population of Lima had reached 10 per cent of the city's total; by 1965 it had climbed to 20 per cent and now is estimated at about one-third of the total. That the barriada areas were without municipal services was not an initial deterrent; people simply went without and made do, much perhaps as they had done in the rural environments from which many of the residents (or their immediate families) had come. From 1940 to 1960 more than

50 per cent of Lima's population growth was due to in-migration.*

The barriadas have, in most instances, improved over the years as public infrastructure has been installed and as individual owners have found the means, either through their own labor or through the employment of artisans, to improve their properties. So has the scholarly and public understanding of the barriada and its urban profit-and-loss statement.

In most developing countries, where typically no resources existed to meet urban growth by conventional housing construction and neighborhood service areas, the growth of barriadas (read ranchos, bustees, bidonvilles, favelas) has been greeted with shame and consternation--shame in that the conditions of life in the barriada seemed to contradict all too visibly the social objectives which are an article of political faith, and consternation because the barriadas and their inhabitants seemed a threat to any well-ordered urban environment. Barriada developments were considered to be cancerous "misery belts" to be eliminated by forcible clearance if necessary or if possible, by a limitation of in-

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* Gianella, Jaime, "La Barriada: Algunos Aspectos Economicos", Cuadernos DESCO A2. Lima, April 1969.

migration, and by the construction of decent, safe and sanitary housing in decent, safe and sanitary neighborhoods. Slowly, as better understanding came about, researchers and public officials began, as in Peru, to see barriadas in a different light, with a recognition that they were perhaps the only method by which urban growth could be accommodated and low income families housed, in countries where resources would not permit urban expansion in the ordered form that the conventional planner and good citizen would wish to see.

This new attitude began to emerge in Peru at the beginning of the 1960s when Peruvian researchers and such foreign experts as Turner and Mangin* began to put forth a "revisionist" view which took issue with the conventional wisdom. In their view, barriadas were not an "abnormal" growth but a natural one to be expected in a developing country.** They found and stressed positive aspects of barriadas, by arguing that they were created and constructed by well organized groups, that they were not the natural

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* See special issue of Architectural Design magazine on urbanization in Latin America. London, August 1963, including some of their first articles on the subject.

** Rodriguez, Alfredo. "Notas para una Interpretacion del Desarrollo Fisico de las Barriadas", Cuadernos DESCO, A2. Lima, April 1969.

habitat of criminals and misfits but of normal families expecting to take a normal part in social processes, and that the "settlers" were seeking their own solution, by their own individual and political effort, to the housing and environmental problems that beset them.

Turner showed also that housing in the barriadas cannot be measured by static standards; instead, a process is involved which can produce regular and measurable gains in the improvement of housing quality and neighborhood consolidation. He argued further that the barriadas offer not only a frequently crude form of shelter but also provide to their inhabitants a way of obtaining a place in society and thus a sense of security. He saw the situation of the barriada dweller as differing from the in-migrant living in the central city slum in offering such security, and he contended that in neither case--barriada nor slum--was housing quality so important as proximity to work (central city) or the possibility of eventual improvement (barriada). As the case was stated, the barriada gave a chance to the poor urban family to improve itself socially, economically, and environmentally.*

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* Turner, John F.C., A New View of the Housing Deficit, in "Housing Policy for a Developing Latin Economy", Univ of Puerto Rico, Rio Piedras, Puerto Rico, 1966.

Turner's work in Lima (together with the Calcutta Metropolitan Planning Organization's work in that city) helped to popularize the now accepted concept of "site and services" as opposed to formal "housing projects," in that site and services can--with a minimum public investment in land and infrastructure--make it possible for people to build their own shelter with their own skills and resources, improving their basic structures as time and opportunity permit.

A second generation of researchers has gone beyond these views of the early 1960s challenging as they were in their time, to pose still more challenges. This newer intellectual view sees the barriada as it sees all other social inequalities: a product of the structural malfunctioning of the economic system as a whole.

A new vocabulary has been introduced, which employs as code words marginalidad, dependencia, and sector popular, which require no great knowledge of Spanish to be translated as "marginality", "dependency", and "low income group". These terms mean little, however, until they are interpreted according to current usage in Latin America, as applied in urban studies and the social sciences.

The concept of marginality was developed at

ILPES* and DESAL**, organizations for research in the social sciences based at Santiago, Chile. These groups divided national populations into "marginal" and "integrated" sectors, with the marginal group defined as the economically powerless portion of society. They argued that public action should be directed at bringing the marginal population into the "modern", i.e. the economically productive economy. A research group at the Institute Torcuato de Tella in Buenos Aires undertook further studies on "marginality" and gave a Marxian interpretation to the concept, rejecting the ILPES and DESAL thesis that the marginal population could be introduced into the modernizing economy under the economic systems normally found in Latin America, and arguing that a condition of "dependency" would prevent this from happening. These researchers, who have since left the Instituto, brought forward the idea that the marginals were dependent upon national economies which were in themselves dependent upon the economies of the developed countries, and that full-scale change in the internal and external economies of Latin American countries would bring about the elimination of marginalidad and dependencia.

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* Instituto Latinoamericano de Planeamiento Economico y Social.

** Centro para el Desarrollo Social de America Latina.

In Peru, this view (with some modifications) is represented at the Centro de Estudios y Promocion del Desarrollo, whose acronym is DESCO and at the Instituto de Estudios Peruanos (IEP). The modifications are important.

Our interest arises from the fact that scholarly phrases, if they have a revolutionary content, will (as these have) acquire a political constituency, and that this mixture of words and ideas has an urban base--if not an immediate urban application. Marginalidad, dependencia, and the sector popular are closely related to the barriadas and their people, and their acceptance in public policy could change the course of public action in regard to improvement programs in the pueblos jovenes and their equivalents throughout Latin America.

Published plans for barriada development are comprehensive. In Peru, the national plan for the development of the pueblos jovenes from 1971 to 1975 puts forward three project areas:

1. The improvement of infrastructure.
2. Social and economic programs, such as the broadening of educational opportunities and training for employment opportunities.
3. The development of cooperative industries to

benefit the barriada dwellers.

The technical staff at ONDEPJOV believes that the second and third objectives in the announced plan will ultimately take priority over the first. The continued growth of metropolitan Lima's population and the consequent expansion of its barriadas may, however, create pressures for infrastructure improvement that will continue to have first call on any government's energies and resources. Plans for community development in its social sense and the organization of cooperative enterprises are often vague and difficult to implement, whereas plans for the installation of infrastructure and municipal services can be more precise. There is disagreement among professionals as to how best to accomplish the social engineering of poverty programs; everyone has a reasonably good method (if he has the money) of bringing water, sewers and electric power to an urban neighborhood.

We are laboring the points of marginalidad, dependencia and the sector popular because we expect them to arise not only in Peru but in all the countries of Latin America which this survey will cover.

The phrases and concepts will appear in many contexts and have many applications, but they will appear most

frequently in relation to the barriadas and the people who live in them.

We are not setting forth a proposition that the barriadas are the crowning glory of an urban civilization, or that many of them are not deplorable places in which to live. It does seem to us that they have been a viable method of accommodating an enormous influx of new urban dwellers; that they have done so without destroying the basic environment and economic productivity of the cities from which they grew; that they offer a chance of self-improvement to those who live within them; and that as a transitional element in urban settlement, if they did not exist, as was said of the Holy Roman Empire, they would have to be invented.

THE CHARACTER OF LIMA

It would be a mistake, of course, to look at metropolitan Lima solely as an aggregation of barriadas. Lima is a full-fledged metropolitan city, with all the attributes of a functioning center of a nation's political, economic, and cultural life. We found it a city with charm and character, combining modernity with a certain sense of the past that has not been altogether lost by the erection of tall buildings and the flow of traffic. (There are 300,000 motor

vehicles registered in Lima.) It would have been wise, we think, to have put more restrictive height controls on new construction in some areas. But despite that omission, Lima retains an air of tranquillity which has been lost in Caracas and Mexico City.

The parks and boulevards are handsome; the upper-income residential areas are as pleasant as one would hope to find anywhere and by no means limited to a few exclusive blocks; the new buildings are in the international style; the transportation system seems to work without undue crowding; in summer, the nearby beaches are packed with Lima people seeking the sun and Pacific surf. Despite the city's tropical location and its desert site, it gets relatively little sunshine for most of the year. Our favorable impressions were perhaps heightened by our February (summer) visit.

Lima does not give an immediate impression of a political capital. There is no great concentration of government buildings, and no symbolic national center. The presidential palace is a relatively modest building, sited at the Plaza del Armas on the very ground selected by Pizarro early in the sixteenth century. Nor is there a civic center of consequence from which the city is administered. Perhaps this is because no one agency governs the great city.

THE STRUCTURE OF METROPOLITAN GOVERNMENT IN LIMA

We have come to recognize that across the world, from New York to Calcutta, the structure of government has not changed its character to conform with the growth of metropolitan urban complexes. Metropolitan Lima is no exception. The provincia of Lima was formed under a decree of August 4, 1821; the provincia constitucional of Callao was created by a special law of April 22, 1857, as a recognition of its valor in a power struggle of that day. Both still exist as separate governmental entities.

Peruvian government is structured in a hierarchy of departamentos (states), provincias (counties) and distritos (boroughs). There has been no tradition of home rule; one authority, with a particularly long view of history, says that "local government in Peru has evolved slowly over the last eight centuries."* Neither the Incas nor the Spaniards were decentralizers of power. The presently applicable organic law of municipalities which applies throughout the country was passed in 1892; its provisions for the election of local officials were suspended in 1919, restored in 1963, and again suspended by the present Revo-

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* Furlong, William L. "Evolution and Development of Local Government in Peru".

lutionary Government of the Armed Forces. While Peru in effect has a wholly centralized government in that all ultimate power lies in the national administration, no such centralization of authority is applied to metropolitan Lima, where the provincia of Lima contains twenty-seven distritos,* and Callao has three more within its adjacent, but governmentally distinct, area. All local officials, and there are many, are now appointed by the national government. Each provincia has its mayor and council, and so does each distrito. There are also many other public agencies, functioning either as sections of central ministries or as independent public authorities, which make major decisions as to the administration and development of metropolitan Lima.

As a matter of historic interest, the election which was held in the provincia of Lima under the Belaunde government in 1966, produced a mayor, Luis Bedoya Reyes, who is reported to have exercised considerable civic leadership. He was allowed to finish his term by the present government although he had been elected as a supporter of the President which it deposed, but he was not re-appointed at the expi-

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* This is the count as given in the Anuario Estadico del Peru 1966. Another authority, Ing. Alfredo Saravia T., in his El Gobierno Metropolitana, 1968, writes that there are thirty-six district councils in greater Lima.

ration of his term. Austin published his very informative dissertation on the role of municipal government in the national development of Peru* before the present military regime took power, and there have been some changes in assignments within ministries since that time, but his general statement is still substantively correct:

> The great problems facing Lima, which are similar, except in scale, to the problems of all urban centers in Peru, are being dealt with by a variety of governmental units. Education is in the hands of the national Ministry of Education; housing and barriada problems are under the direction of the National Housing Board;** water and sewage matters are handled by the Lima Sanitary Corporation; physical planning is shared by the National Office of Planning and Urbanism, the Ministry of Development and the National Housing Board; problems of public transportation are consigned to the Lima branch of the national Office of the Director-General of Traffic; and streets and roads are a joint responsibility of the individual municipalities and the Ministry of Development. There is no metropolitan-wide unit or authority which attempts to bring together all of these programs into a single system in order to formulate common policies or even to exchange information.

The above was published in 1969, and the names of the agencies and their staffing have been re-shuffled, but the new government, with all of its vigor, has not yet consoli-

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* Austin, Allen G., op. cit.

** Since 1968, this action has been transferred to the Ministerio de Vivienda.

dated a development program for metropolitan Lima, nor concentrated its administration in a single area-wide agency with full planning and executive powers. Saravia urged the formation of such a metropolitan authority in his book on metropolitan government* and it was proposed by the Oficina Nacional del Planeamiento y Urbanismo in its development planning for Lima. There are presently no indications that a sweeping consolidation is likely. Under the circumstances, which are typical rather than atypical of the world's great urban centers, it is something of a miracle that the metropolis continues to serve its people reasonably well and to maintain its productivity.

PLANNING FOR METROPOLITAN LIMA

Since Austin wrote the passage quoted above the Oficina Nacional de Planeamiento y Urbanismo has been eliminated as an advisory staff to the Ministerio de Vivienda, and is now an integral part of the ministry as the Direccion General de Desarrollo Urbano; divided into a planning branch and a land use controls division. There is disagreement among professionals in Peru as to the merits of the change. Some think it beneficial in that it gives the planning agency direct power instead of confining the agency to an advisory

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* See footnote, p. 6.

role; others think it detrimental in that it makes the planning function subordinate to the administrative and political bureaucracy.

In 1967, the Oficina Nacional de Planeamiento y Urbanismo published what it called an Esquema Director 1967-80 as the basic document of a comprehensive development plan for Lima-Callao. This work was undertaken as a service to the municipality of Lima, whose then Mayor and Vice Mayor are credited in the document with making possible the initiation of the study. The planning document is the usual thick compilation of data, supported by the necessary tables and maps which may be expected in a comprehensive planning publication. As stated in its introduction, its purpose is "to elaborate a coherent document that makes it possible to analyze the present and future problems of the metropolitan area, to serve as a basis for the adoption of policies for public action, and to make possible the formulation of a tentative five year program to guide the future development of the area." The Esquema is divided into nine chapters, dealing with its general purposes as stated in its introduction, a general consideration of the functions of the metropolis, the pattern of urban settlements, existing land uses, transportation, basic employment and population projections, projected demands on land use and infrastructure, the future expansion of the metropolis, and special consid-

erations for the Rimac and Lurin river basins and the location of industrial zones.

The planning effort has resulted in a zoning plan and ordinance which was officially approved on January 5, 1971, and a transportation plan now ready for publication. The zoning plan also sets forth a siting and programming of such community facilities as schools, health centers, and recreational areas.

The proposals suggested in the plan which have been most fully implemented are those concerning major highways, which were given an apparent priority in order to provide ready access to the public beaches and to the barriadas, north and south.

The planners anticipate a metropolitan population of five and a half million in 1980, and a possible population in 1990 of nine to ten million people. Growth of that magnitude will require, in addition to the very large investment needed for housing and standard public services, the planning and construction of additional sources of water, of specialized mass transit systems, and a treatment system for the city's wastes, which are now discharged into the Pacific ocean and contaminate the beaches which are a major recreational resource.

Critics of the planning now in progress argue that it is too concentrated in physical planning, and too little concerned with social and economic diagnosis and prognosis; and that its zoning proposals are too sweeping and therefore impossible of enforcement. We did not have sufficient time to study the planning proposals in detail.

It is an advantage, as we see it, that metropolitan Lima even has a planning organization devoted to its service and that the organization is staffed by competent technicians.

"OPOSICION ENTRE LIMA METROPOLITANA Y EL RESTO DEL PAIS"*

Official Peru does not look with favor on the overwhelming concentration of its urban population and its modernized economy in metropolitan Lima. The new national development plan, as prepared in December, 1970, for subsequent final approval by the Government and publication as an official document in the very near future, states clearly that planned development should execute a policy of "reducing the disequilibrium in the distribution of population within the country." The phrase is a direct translation of

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* The phrase is from the National Development Plan 1967-1970. It translates as "the opposition between metropolitan Lima and the rest of the country".

Point Ten in the statement of the general objectives of the plan.*

Nor is concern for regional development new in the public thought of Peru. In 1962, a presidential commission was appointed to study and report upon urban government and development in the country. It took its name from its chairman, Mario Alzamora Veldez, and its report was rendered to the then President, Ricardo Perez Godoy. While the function of the Alzamora Commission was to draft a new organic law for Peru's municipalities, it went beyond that narrow mandate to propose a system of regional councils, whose headquarters were to be located in the cities of Piura, Chiclayo, Trujillo, Huancayo, Ica, Arequipa, Iquitos, and Lima. The commission favored the creation of these regions as the basis for regional development rather than the existing departamentos on the grounds that they provided a more rational geographic and administrative base for future economic and social development. The special assignment proposed for the regional councils was to plan and administer economic and social development within their respective jurisdictions. They were to be composed of eleven members in each case, popularly elected within their region. Each

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* Instituto Nacional de Planificacion. Plan Nacional de Desarrollo Economico y Social, 1971--75. (draft) Lima, 1971.

council was to have received technical assistance from a regional planning office to be placed under its jurisdiction, which office was also to have acted as a coordinator between the region and a national planning organization.

This proposal failed of adoption, as did the entire Alzamora report.

The National Development Plan for 1967--70, which is a handsomely presented document of four volumes, titled Plan de Desarrollo Economico y Social 1967--70 introduced the phrase "regional disequilibrium" into the official vocabulary of the country, and spoke bluntly of the "opposition" of metropolitan Lima to the rest of the country in terms of development opportunity. It contained an analysis of a number of regions: Metropolitan Lima, a Northern Region, a North-Central Region, a Central Region, a South-Western Region, A South-Eastern Region, and a Southern Region, proposing the grouping of various departments within each of them. The 1967--70 Plan defined "regions" as groups of departments which have geographical proximity, climatic and topographic characteristics in common, and generally accepted growth centers for development and administration. The analyses in the Plan would perhaps disappoint the more theoretical regional planners by their simplicity and brevity; each one is only a few paragraphs of text.

Again, these recommendations were not implemented. The Plan strongly supported the country's main development thrust under its then President, Belaunde Terry, which was to open the Selva (to repeat, the wooded areas east of the Andes) to intensive settlement, originally rural and then presumably in urban concentrations. Belaunde pressed hard to create a system of highways (La Carretera Marginal de la Selva) which would create the communications necessary to develop a settlement pattern in the area where the mountains slope into easy foothills and where climate and soils were thought to be favorable to pioneering populations, drawn from the over-crowded highlands. The total length of the La Carretera Marginal, when completed, would be 2,560 kilometers. The 1967--70 plan recommended eighty-four road-building projects, of which twelve were part of the new interior system. Those twelve projects were for the construction of 1,615 kilometers, or 63 per cent of the total mileage of the system. The 1971--75 Development Plan, a product of the present government, continues to list additional highway construction projects needed to complete the system, although the specific references to La Carretera Marginal de la Selva are understandably omitted. Information as to the success or failure of the program is hard to find. We were informed that all but 250 kilometers of the interior highway system has been completed but that these gaps remain in two critical portions of the system. We were also told that a re-

sources survey of the Selva region, near completion under United Nations Development Program (UNDP) auspices, will not be too optimistic in its conclusions; that, in effect, those parts of the Selva that might be considered to have productive agricultural potential are already under settlement and cultivation. We were not able, within the time limits of our survey, to visit the Selva ourselves, but would strongly recommend a field trip there as one way of determining the degree of settlement which has taken place, and the progress being made in opening new lines of communication.

National development plans in Peru are the product of the Instituto Nacional de Planificacion, known as INP. There has been the predictable change of executive direction since the change of government, and a new development plan has been drafted but not yet formally approved for 1971--1975. The INP under its present leadership, as before, favors a regional program of development in Peru, reducing the primacy of Lima, and promoting alternate growth poles in other parts of the country which have the potential for utilization of natural resources, industrialization, and urbanization.

The INP proposes four major zones of regional development: the North, with its major urban bases at Chiclayo, Trujillo, and Chimbote; the South, with its major urban base

at Arequipa; a Central region, extending from Lima on the coast to the highlands at Huancayo; and the East, where Iquitos, with a present population of about seventy thousand is the existing urban center. It seems clear that major efforts in development, if the present plan is followed, will be concentrated in the Northern and Southern growth zones. Two regional development offices have already been established: the Oficina Regional Desarrollo del Norte, with headquarters at Chiclayo, and a parallel Oficina Desarrollo del Sur, with headquarters at Arequipa. The Selva region in the east, where Peru embraces the mainstream of the Amazon, does not have a high priority in the present thinking of INP.* Regional planning as such, however, does have a high priority and is a specific responsibility of the agency.

The Boletin of the INP of July 15, 1970, published an expression of doctrine in land use assignments and regional planning which is interesting as a statement of intent:

> A liberal economic system with unrestricted economic motivation and profit-seeking generates chaos in land use. In Peru, the problems in land use are evident,

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* Regional offices now exist for the Central region (Huancayo) and the Selva (Iquitos). The Selva has recently received greater attention because of important new oil discoveries in this region. (ed. note).

> and, therefore, we are in confrontation with them: there is the gigantism of Lima, the coastal concentration of development, the congestion in the cities and proliferation of pueblos jovenes in the coastal towns, the very sparse settlement despite the tremendous demographic pressure in the Sierra, where land resources are very scarce....On the other hand, significant resources in mining, soil, forests, fisheries, and other natural resources are not being exploited, there being insufficient labor and capital available for their exploitation, due to the absence of a regional development policy which will meet inherently difficult geogrphical requirements.
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> For all of these reasons, the Revolutionary Government of the Armed Forces has declared in its document Bases para un Programa de Desarrollo Nacional a Largo Plaza that the two pillars of national transformation are structural reforms and changes in the economic uses of land. Regional planning is a fundamental and valuable tool in the accomplishment of these objectives.
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> Therefore, the INP office of regional programming has undertaken as one of its basic tasks the definition of a regional planning policy on a long-range, intermediate, and immediate basis.*

It is clear that the INP presently looks on coastal Peru as the country's most promising growth area, and thinks in terms of decanting surplus population from the highlands toward the coast and its developable valleys. There is also a strong emphasis on Peru's offshore waters as a development zone. The fisheries are of course very rich at present, and there is now the prospect current throughout the world that

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* INP, Boletin del Instituto Nacional de Planificacion. "El Acondicionamiento del Territorio", N° 103, Ano V. July 15, 1970, p. 4.

coastal areas hold exploitable reservoirs of oil.

While regional planning and development have become accepted concepts, neither the planners nor the Government which they serve have yet developed a full-fashioned strategy to make the proposed growth poles so attractive as to divert a major proportion of the country's inevitable urban growth from metropolitan Lima to other centers. Tax incentives for industries which agree to locate in the areas of proposed regional growth are a carrot; the use of the Government's power to license new industrial establishments within the private sector might be a stick. The Government will have control of the location of public sector investment (including investment in basic industries), and by the installation of such infrastructure as port development, hydroelectric projects, and major irrigation schemes, it will have the capacity to direct economic growth and employment opportunities.

As an example of such public actions, a current negotiation with the Soviet Union is proposing an investment of thirty million dollars in fishing and fish processing installations in the north of Peru.

The probabilities seem to be that urban growth outside of metropolitan Lima will be based upon the utilization

of natural resources and industrial production for export, while Lima will continue to dominate the country's administrative and commercial functions and maintain its lead in industrial production for the internal market. There is the usual discussion of what have come to be the cliches of spatial diversification, such as agro-industrial centers, petro-chemical complexes, integrated metallurgical establishments, and the utilization of forest products. Marine products have assumed an important place in Peru's economy and in its urban growth patterns, but whether they will be maintained on a sustained yield basis in face of economic pressures to exploit and over-utilize them will depend upon management practices (and market prices) which all too frequently in recent world history have exhausted rather than sustained the resource.

Peru's regional development program does not yet provide for regional agencies with the public power, technical skill, executive and political strength, or financial resources necessary to implement regional plans--which should be plans that the regional organization has itself helped to make. Our experience has shown that regional plans are likely to remain paper exercises unless such organizations, equipped with brains, adequate jurisdiction, and independent sources of finance, exist. Central bodies find it hard to bring conviction to regional devolution of planning and

development.

It would be interesting, for example, to find out how many government officers and technicians of high rank would be willing to leave Lima to take up regional assignments. It is likely, however, that the present Government does have stronger ties in the provinces than its predecessors; surprisingly few of its Cabinet members were born in Lima.

YOU CAN'T TELL THE PLAYERS WITHOUT THE NUMBERS

Peru's urban future--indeed, its future in all aspects--is ultimately dependent upon its rate of population growth, and upon its ability to adapt its environment and its economy to the number of people who will live within its borders. The country expects, as we have seen, to conduct a national census in September, 1971. It cannot be said that they make a habit of census-taking. The 1961 census was the first since 1940; the 1940 census was the first of the twentieth century, taken after an interval of sixty-four years.

There is, however, general agreement among demographers that the present population of Peru is between thirteen and fourteen million, with predictions weighted somewhat toward the higher figure. The demographic agencies with programs of research and analysis in population are the Oficina Nac-

ional de Estadisticas y Censos, known as ONEC, which is the public body, and the Centro de Estudios de Poblacion y Desarrollo, known as CEPD. Their work provides a basis for present population estimates and projections for the future.

ONEC projects Peru's population will reach 15,900,000 in 1975; go to 18,500,000 in 1980; pass 25,000,000 in 1990; and be at 33,500,000 in the year 2000.* CEPD estimates are both higher and lower since it gives a range of projections with a high of forty million projected for the year 2000.** Population estimates will soon be confirmed or contradicted by the census, but it is thought that the present rate of population increase is more than 3 per cent per year, and that this rate of increase will decline slightly in the years ahead.

There is no official policy which favors population control, and proposals to include it as a feature of national development planning have not appeared in the published development plan for 1967--70 and will not appear in

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* Oficina Nacional de Estadisticas y Censos (ONEC). Boletin Especial de Analisis Demografico, 1970. Lima, Feb. 1970, Cuadro 3, p. 5.

** Centro de Estudios de Poblacion y Desarrollo (CEPD). "Boletin Informativo", Ano 4, N° 16. Lima, Junio 1970, p. 1.

the development plan for 1971--75. A government spokesman voiced a negative reaction to any suggestion that the nation adopt a policy of population limitation. It is clear that for the present, any decline in Peru's birth rate, if it occurs, will be the result of societal consensus rather than public exhortation. It is most doubtful that any drop in population increase, brought about by voluntary rather than natural causes, will significantly affect Peru's population in the next decade.

National, regional, and urban planning must therefore accept the present trends, as confirmed by the upcoming census, as a basis for their policy proposals and planning decisions.

As is usual in countries with a rapidly increasing population, Peru has an age distribution heavily weighted toward the young. More than 45 per cent of its people are under fifteen years of age, as against 28 per cent in the United States. The proportion of young (and hence dependent) population will decline only slightly in the next thirty years according to ONEC estimates. CEPD, in its high range of possibilities, predicts no decline at all.

ONEC projects an "economically active population" of

31.5 per cent through the 1970s.*

TABLE I

AGE DISTRIBUTION, PERU: 1940--2000

(Percentage of Total Population)

Age	1940	1960	1970	1975	1980	2000
0-14	41.0	44.2	45.5	44.5	43.0	40.5
15-64	54.5	51.0	51.3	52.4	53.0	56.2
65-over	4.7	3.8	3.2	3.0	3.9	3.4

At the beginning of this survey paper, we took issue with the census definition of urbanized population, and there is no point in citing projections here which are equally skewed by faulty definition. Cities of more than 25,000 population are more properly put into an "urban" category, and on this basis, the following estimates and projections are made:

1. About one-third of Peru's people now live in cities of more than 25,000.

2. The urban population is growing faster than the population of the country as a whole, and by

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* ONEC. op. cit., Cuadro 18, p. 25.

1980, thirty-eight out of every one hundred Peruvians will be living in cities of more than 25,000. While projections of total population increase are based upon a rate of 17 per cent in each of the two five year periods between 1970 and 1980, the population increase in the cities of more than 25,000 will be 26 per cent in each of the five year periods.

3. The most significant urban growth will be in the larger cities. Total population in cities of from 25,000 to 50,000 may actually decline, while population in cities of more than 100,000 is expected to increase by 31 per cent between 1970 and 1975.

Metropolitan Lima will continue its predominance, which has been stressed in this paper, during the next decade, but Peru will not become a predominantly urban country. A majority of its people will still, in 1980, be living on farms, in villages, or in small towns.

TABLE II

GROWTH OF URBAN POPULATION IN PERU: 1940--1980

	1940	1961	1970	1975	1980
Percentage of Population in Cities	14.3	24.2	32.6	35.0	38.0*
Cities of more than 25M (pop. in 000s)	895.9	2,590.4	4,405.9	5,553.4	7,040.3*
Peru (total pop. in 000s)	6,207.9	10,319.5	13,586.3	15,868.8	18,527.0

* Estimate by Survey Staff

Source: Oficina Nacional de Estadisticas y Censos (ONEC). Boletin Especial de Analisis Demografico 1970. Lima, February 1970, Cuadro 3, p. 6 and Cuadro 16, p. 23. (Analysis by Survey Staff).

TABLE III

DISTRIBUTION OF POPULATION IN CITIES OF MORE THAN 25,000

	1940	1961	1970	1975
Total (000s)	895.9	2,590.4	4,405.9	5,553.4
100,000+	623.4	2,002.4	3,691.5	4,828.6
50,000+	76.8	422.8	243.4	338.0
25,000+	195.6	165.4	471.0	386.8

Note: Details may not add to totals due to rounding.

Source: Oficina Nacional de Estadisticas y Censos (ONEC) Boletin Especial de Analisis Demografico 1970. Lima, February 1970. Cuadro 16, p. 23. (Analysis by Survey Staff).

THE INSTITUTIONAL INVENTORY--PLANNING, RESEARCH, AND TRAINING

The planning agencies which make effective policy in Peru operate at the national level. The first among them is the Instituto Nacional de Planificacion (INP), which was mentioned earlier in our discussion of regional planning. The INP is the organization which makes the national development plans, and is therefore at the top of the planning pyramid. It is not subordinate to any ministry, reporting directly to the office of the President.

Urban planning is done at the Ministerio de la Vivienda in the Direccion General de Desarrollo Urbano. This agency does city planning on a country-wide basis. Where local planning bodies exist, they are very weak both technically and in assigned powers.

In addition to and beyond these planning agencies, policy decisions which affect urban life and urban development are made, inter alia, at:

- Oficina Nacional de Desarrollo de Pueblos Jovenes (ONDEPJOV)
- Oficina Nacional de Desarrollo Cooperativo

- Ministerio de Educacion
- Ministerio de Salud
- Ministerio de Trabajo
- Ministerio de Industria y Comercio
- Ministerio de Energia y Minas
- Ministerio de Transportes
- Ministerio de Vivienda

All of these public bodies, it can be assumed, help to shape their own programs, and all of them implement projects and enforce regulations which fall within their assigned responsibilities. In addition, the Banco de la Vivienda and the Empresa de Administracion de Inmuebles execute programs with urban impact.

There are at least three major agencies which gather data which is necessary for urban planning and development. They are:

- Oficina Nacional de Estadisticas y Censos (ONEC), which was formerly known as the Direccion de Estadisticas y Censos (DINEC). It is responsible to the Ministerio de Economia y Finanzas. As we

have noted, it conducts the national census when there is one.

- Centro de Estudios de Poblacion y Desarrollo (CEPD). This was created by a government decree in 1964. It has had support from several international agencies.

- Centro de Estudios de Mano de Obra (CEMO)

There are at least ten agencies and institutions which conduct research relevant to urban and regional problems. They are:

- Instituto de Estudios Peruanos (IEP)

- Centro de Estudios y Promocion del Desarrollo (DESCO)

- Departamento de Ciencias Sociales Universidad Catolica de Lima

- Centro de Investigaciones Sociales, Economicas, Politicas y Antropologicas (CISEPA) Universidad Catolica de Lima

- Instituto de Investigaciones Economicas Universidad de San Marcos

- Instituto de Planificacion de Lima (IPL) Departamento de Sociologica Economia y Planeamiento Universidad Nacional de Ingeneria (UNI)
- Programa Interamericano de Planeamiento Urbano y Regional (PIAPUR). This program is supported by the Organization of American States (OAS).
- Research Division of ONDEPJOV
- Research Division of the Ministerio de la Vivienda
- Research Division of INP

Any observations which we make as to the work of the agencies necessarily reflect the limitations of our time and knowledge. They should therefore be taken as suggestive only, subject to further investigation and correction.

Both research and policy formation must rely on data. In Peru the principal agency which collects data is the Oficina Nacional de Estadisticas y Censos (ONEC). We have used this agency's product extensively throughout this survey report, as must all persons who write about Peru. The last statistical yearbook published for the country was ONEC's work of 1966--Anuario Estadistico del Peru--a detailed volume of 1,592 pages. ONEC will conduct the 1971

census and report its findings, but it will probably be several years before the full census data is available. ONEC has, however, published as many as seventy statistical documents in the ten years since the last census.

There is much valuable data, handsomely presented, in the Atlas Historico Geografico y de Paisajes Peruanos which was published in 1970 under the imprint of the Instituto Nacional de Planifacacion. Its cartography is of very high quality, and its textual material is informative.

Another major source of population data is the Centro de Estudios de Poblacion y Desarrollo (CEPD). This organization, which is concerned with the demography of the country and the effects of population growth, periodically publishes a bulletin containing demographic data and analyses, and publishes various research reports. Other research centers such as CEMO produce some important demographic data, based upon surveys which they conduct as part of their programs.

It must be noted that Peru is below the standard of most Latin American countries of its size and importance in its assembling and publishing of basic data relevant to national development and the making of public policy.

The web of training and research institutions in Peru

includes a number of groups that are concerned with the process of urbanization. Although institutions of higher education account for a great deal of the activity, independent research groups and the operational research units of government are especially important in the urban field.

The only academic program in urban planning is located at the Instituto de Planificacion de Lima (IPL), of the Universidad Nacional de Ingeneria (UNI). Established in 1943, this program initially consisted of a one year course of study in urban and regional planning. In 1961, with OAS assistance, it was expanded to offer a two year course of graduate study and research leading to a master's degree.

Students from other countries in Latin America attend a modified first year course at IPL under the auspices of the PIAPUR program which provides scholarships and travel expenses for foreign participants.

The scale of the IPL program is not large. Of more than 5,000 students enrolled at the University in 1969, only 35 were in IPL. Many of these were not Peruvians, but students from other countries enrolled under the PIAPUR program. The increase in the number of Peruvian "urban planners" is thus relatively slow.

Related programs in the physical technologies at UNI are more heavily represented. In 1969, architecture accounted for 440 students; civil engineering, 1,250; sanitary engineering, 141.

Urban related courses in the social sciences are available at several other universities in Lima. They exist, however, within a framework of programs that are geared to producing "sociologists", or "anthropologists", without specialization in the urban application of these social sciences.

There is, however, one urban sociology course offered by the Department of Social Sciences at the Catholic University of Lima. Planning Law is taught in a course at the Law School of the University, and a course in urban anthropology is available at the University of San Marcos. Training in public administration is given at the Higher School of Public Administration (ESAP) but it appears that the curriculum is not directly related to the problems of municipal government.

In addition to obvious thinness in the number of courses available in the field of urbanization, further gaps are apparent. There are no teaching programs available, for example, in traffic and transportation planning. Urban

management is not well covered, although some short courses for municipal officials have been run by PIAPUR.

While the inventory lists ten major agencies and organizations in Peru which conduct research relevant to urban and regional problems, four are primarily concerned with basic research rather than with university instruction and the operational programs of public bodies. DESCO is working directly in urban studies, while CEPD, CISEPA, and IEP are more concerned with issues that bear on the root causes and consequences of urbanization. IEP, for instance, devotes much of its research program to such areas as rural social structures, urban and rural political organization, and migratory flows.

At the present time DESCO's work program includes a major study of the barriadas of Lima. In particular, its research staff is developing an inventory of all social and political organizations operating in these areas, with a view to identifying the role that interaction of these groups has on the development process. DESCO is financed in part by private sources, and by fees received for consultation services provided to governmental agencies. Studies have been completed on three such organizations--ONDEPJOV, INP, and the Ministerio de Vivienda.

We have not attempted an analysis of the current work program of each of the research groups included in the above inventory. We have, however, tried to identify the critical issues perceived by these groups: shortages in human resources, unreliability of statistics, and the problem of timing, considered the most crucial. It appears that it is often difficult to feed research results into the executive chain at a time when they can be used optimally. Decisions must be taken in response to pressing problems and often cannot wait for guidance from research groups.

Additional research and training is carried out in the work of the internationally assisted projects. A fellowship program is an important component of the programs funded by the UNDP. Participatory training is usually included in projects supported by bilateral agencies. International assistance thus helps support the existing structure of urban research and the development of urban planning and management skills in Peru.

A very interesting example of international assistance in the training of urban specialists is evident in Peru. For a period extending from 1962 through 1965, a special program for Latin American students was conducted at Yale University's Department of City Planning, in cooperation with the OAS. The program was a two year course

which granted a degree of Master of City Planning. We find that in Peru in 1971, key positions in urban affairs are held by the graduates of that program: they include the director of regional planning for the INP, the chief urban research specialist at DESCO, the former director of urban planning in the Ministerio de Vivienda who is now head of the Departmento de Sociologica, Economica y Planeamiento, Universidad Nacional de Ingeneria, and the head of the PIAPUR program in Peru.

To summarize, while some individual training programs have been highly effective (as the Yale experience demonstrates) Peru at present cannot be said to have an aggressive program in either urban research or in specialized training of urban planners and other urban-oriented specialists. It is producing architects and engineers in what appears to be sufficient numbers to maintain its physical development. Its construction industry seems capable of meeting the demands which urban expansion will create.

THE INTERNATIONAL ROSTER

According to a recent inventory compiled by the UNDP Resident Representative, twenty-three international agencies have been operating assistance programs in Peru. The work programs of nine of these agencies have included projects

or technical assistance concerned with the development of urban areas of which five agencies support major projects in urban planning, infrastructure development, and housing. The "big Five" are the UNDP, the World Health Organization (WHO), the OAS, the United States Agency for International Development (USAID); and the Inter-American Development Bank (IDB). Three additional members of the United Nations family--the International Labor Office (ILO), UNESCO, and UNICEF--have participated in UNDP Special Fund projects in Lima and Chimbote. The British Overseas Development Administration (ODA) provided technical assistance to the development of a long-range water supply plan for metropolitan Lima.

Aid to urban and regional development has come principally to three areas in Peru--to metropolitan Lima, to the development growth pole centering at Arequipa in the south, and to the zone, which was most severely affected by the earthquake of May, 1970, mainly in the departamento of Ancash.

In the Arequipa area, a joint OAS-Israeli project has provided technical assistance to a resettlement program, and USAID has assisted, through the Stanford Research Institute, in the planning for this southern region. The regional planning organization for southern Peru is called ORDESUR.

In Lima there is an interesting experimental project supported by the UNDP Special Fund called PREVI.* PREVI is carrying out three demonstration projects, whose purpose is to illustrate the effect of improved technology and superior design skills on construction costs (and value or money, as the British say) for housing. The projects will provide for the construction of two thousand housing units (on land "fifteen minutes from the central city"), for the rehabilitation of three hundred housing units in downtown Lima, and for one thousand units to be built by individuals on lots where a legal sub-division has been made and appropriate infrastructure installed.

The new housing project has a very imaginative origin. The U.N. sponsored an international "competition for ideas" to which local and international architects responded by submitting proposals. As originally conceived, the three best proposals were to be selected and field tested by construction and subsequent use. Present plans, under which the project is being executed, call instead for the construction of a small number of houses conforming to each of the designs submitted. Construction is being financed by the Peruvian government which is investing eight million

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* Proyecto Experimental de Vivienda

dollars in the project; the Special Fund contribution is approximately $1,200,000.

The project team devoted much of its early work to the refinement of the competition designs, so that they could be more precisely adapted to local technology and available materials. Other members of the United Nations family are assisting according to their specialties: an ILO group is analyzing the manner in which local building materials can be best utilized in the construction; UNESCO people are developing criteria for the planning of educational facilities, and advisors from UNICEF are developing similar criteria for community centers.

It is clear that PREVI's work will contribute to the improvement of building technology and to the efficient use of locally produced materials. It is doubtful, however, that improved design and advanced technology as provided in the project will make possible a marked reduction in costs, such as would lower the price of housing to the point where it would meet the effective demand level of the lowest income groups. Present estimates are that the units will cost as much as $2,000 each. The experimental nature of the project, and its construction of numerous housing types in relatively small numbers, obviously eliminates some economies of scale. It can be argued, however, that calculations made

after the completion of the project, with adjustments for these extra costs, may provide a basis for significantly reduced future costs in models which do best in the field tests.

PREVI is subject to strongly voiced criticism in Peru. At the Ministerio de Vivienda there is serious concern that after the four years in which the project has been functioning, no practical result has yet come to them which they can apply in their on-going projects. Urban specialists argue that the PREVI staff is carrying out in-depth research on basic design variables (e.g. anthropological measurements, the atrium house, etc.) which has already been done elsewhere and is published in accessible and reliable form. Finally, there is a body of opinion which holds that the very idea of bringing international consultants to provide "ideas" for the development of low-income housing was itself a bad idea; that foreign consultants cannot quickly achieve a full understanding of local conditions such as settlement patterns, construction systems, and the use of materials; and that therefore their proposals introduce only superficial observations of the local scene. As a result, it is said, a technology is being produced at PREVI, which is not adapted to the local capabilities or economy, and which does not sufficiently consider the need for labor intensive processes in construction.

USAID housing programs in Lima have followed two courses: the familiar investment guarantee program, and the development of the Banco de Vivienda. The investment guarantee program financed the completion of 4,200 housing units in Lima which (including a sixth project now operative) have made a total American guarantee commitment of $23,100,000. Guarantee authorizations have been issued for five additional projects, which add $17,200,000 of investment to the program.

We would consider the USAID involvement in establishing a housing credit system as more important than the guarantee program in total impact. An American loan of $7,500,000 in seed capital, matched equally by the Peruvian government, was the base upon which the Banco de Vivienda was established. The system of savings and loans organizations in the country has grown to include as many as twenty-three institutions which have more than 375,000 accounts. The USAID housing advisor in Peru considers that the country now has one of the strongest savings and loan systems in Latin America. American aid has also developed cooperative housing programs. A loan of six million dollars was made in 1964, augmented by a four million dollar investment by the Peruvian Government. This loan has financed the construction of 2,250 cooperative housing units in Lima and elsewhere in the country.

As we noted in our discussion of metropolitan Lima, one of its major growth problems will be bringing adequate water supplies to the rainless desert in which the city stands. An ODA mission has just completed a study of potential water resources, and has made proposals for a water supply development program which would meet the city's estimated needs until the year 2000. Copies of this report are not yet available as the proposals are still under study by the Direccion General de Desarrollo Urbano.

The World Health Organization, which is represented in Peru by the Pan-American Health Organization (PAHO), has established a small-scale Center for Sanitary Engineering in Lima. It has assisted in planning water supply systems for a number of municipalities, and in teaching sanitary engineering.

Lima will also become the base of a small technical assistance team provided by the OAS. This team, one of seven in Latin America, will work with the Instituto Nacional de Planificacion in refining its present urban and regional development programs.

The Inter-American Development Bank has been an important agency of international assistance in urban planning and development in Peru. IDB has financed, with a loan of

$790,000, the preparation of development plans for twelve Peruvian cities. It has provided financing for the construction of 22,000 housing units in Peru, including $12,000,000 recently made available for the construction of 4,500 housing units in ten urban centers. The Government will contribute $8,000,000 of its own funds to this program. The local IDB specialist in housing and urban programs was uncertain as to the number of housing units actually constructed to date under the authorizations in effect.

CHIMBOTE - A SPECIAL CASE FOR INTERNATIONAL ASSISTANCE

We have mentioned Chimbote earlier in this report as a point of urban growth in the departamento of Ancash, about 200 miles north of Lima. Chimbote had only 9,723 people in 1940; at the time of the 1961 census, it had grown to 95,026. Present estimates put its population at 200,000 or more, despite (or perhaps because of) the earthquake which struck the region in 1970, and did great damage to the then existing urban structure of the city. It is thought that refugees from the equally shaken earthquake zone in the Sierra have swelled the population, seeking assistance and employment.

Chimbote is a prime example of a growth pole. A hydro-power development created a source of cheap energy;

the cheap energy created an economic opportunity to develop a steel plant; public investment built the plant, and a city formed at what had been a small desert fishing village, with an excellent natural harbor. In order to shape the city, two well-known and competent city planners, Jose Luis Sert and Paul Lester Weiner, were retained to make a physical master plan, which was done in 1957, to guide the development of Chimbote. The city's growth, however, out-raced the expectations of the planners because of the 1960s boom in the fishmeal industry, which contributed a new and very powerful growth factor to Chimbote. The plan was already obsolete, therefore, when the 1970 earthquake struck. The city must now be substantially rebuilt, either according to a new plan now in preparation or by the immediate necessities and energies of the people in place.

The earthquake damage extended over much of northern Peru, and was a major disaster; in terms of loss of life and damage to property; one of the worst in Latin American history. The response of the international community was immediate in offers of aid for relief and reconstruction, with USAID and IDB proposing substantial grants and loans for housing and replacement of infrastructure. The Peruvian Government created a special agency, CRYRZA*, to coordinate

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* Comision de Reconstruccion y Rehabilitacion De La Zona Afectada.

its efforts and muster its resources for reconstruction in the earthquake zone.

Among the proposals for assistance sought and obtained by the government was a technical assistance group dealing with the replanning and redevelopment of Chimbote. A French mission and a Japanese team made separate examinations of the Chimbote terrain to test its seismic characteristics and suitability for urban development. These are now in the hands of CRYRZA, which also has the benefit of a UNDP planning group which expects to work in Peru for some time. The original U.N. mission's document reporting on Chimbote is deserving of quotation at some length:

> The most evident question to be answered is: why is it considered to be necessary to propose so large a project (of total cost to UNDP, more than 1,000,000 dollars) to prepare a plan for Chimbote? The town is at present almost a 'non place', nothing exists there apart from a large collection of nondescript buildings. Indeed, the only buildings which might be said to characterize Chimbote are the SOGESA Steel Mill and the fish meal factories from whose bowels belches the dreadful and all-prevading smell of fish meal, and whose waste products have fouled the waters of the bay. The first basic reason for the large project investment is that something characteristic <u>has</u> to be created: a plan has to be prepared for a new town of 200,000 which is likely to grow to 500,000 in one or two decades, and this town must be far more than the mere collection of shacks that is present-day Chimbote. This, in itself, is a great design challenge.
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> The earthquake has created the opportunity for this exercise in two ways. In the first place, much of present-day Chimbote has been seriously damaged by the disaster--what remains is of very little conse-

quence to the future development of the town. Secondly, preliminary studies by seismological teams from Japan and elsewhere have revealed the necessity to relocate large sections of the town. Amongst other things, this would certainly involve the opening up of new land to the south of the city for residential purposes, and to provide a new business district. The combination of these two factors therefore requires a major replanning exercise as a matter of necessity. Furthermore, this exercise would have to take into account the need to relocate the Pan-American Highway (which presently passes through the city), the aerodrome and certain industrial areas.

A third significant factor here lies in the future significance of Chimbote as a major growth pole in the economic development of Peru. The nation has been undertaking a significant economic planning exercise ....As a result of this exercise, a definite role has been assigned to Chimbote, based on the steel and fishing industries, the hope being that this town (together with the more venerable city of Trujillo) will provide a countermagnet to Lima for the thousands that are now migrating to the coast from the Sierra. To achieve this result, a careful marraige has to be arranged between the economic planning inputs (goals and investments) and their physical manifestation in the shape of a city plan. This will be exceptionally difficult to achieve, both because of the fact that the earthquake has disturbed priorities (which now therefore have to be reassessed), and because the very scale of the damage demands urgent action in the implementation of the project.

A fourth point to be borne in mind is that the very scale of the migration movements is causing social problems on a vast scale. The Sierra people are poor, unskilled and without support. They have to be resettled in an environment which will encourage their natural propensity for self-improvement; they have to be integrated into the social fabric of the new town; and they have to be provided with means of livelihood. This is necessarily a complex operation, requiring considerable foresight and imagination.

Finally, it must be stressed that Chimbote is not the only victim of the earthquake in this coastal zone. Whole villages have been laid waste from points at about 100 kms. to the south to the outskirts of Trujillo in the north. The scale of the disaster must be seen in order to be appreciated. It affected whole

> provinces. This makes necessary--in fact, imperative--the preparation of regional plans which will deal with such matters as water and power sources and supplies, agricultural development, and the inter-relationships between different settlements in the coastal region around Chimbote.

The UNDP accepted the urgency stressed by its exploratory mission and agreed to the request of the Peruvian government, which had actually (as often happens in these matters) been framed by the mission on the Government's behalf. In 1971 it had in Peru a team of six regional and urban planners, three of them Polish and three Yugoslav, most of them with experience in the reconstruction of Skopje, the Yugoslavian city which was also wrecked by seismic action and reconstructed with international assistance.

As a first effort, the Chimbote planning group has produced a physical sketch plan, for the redevelopment of Chimbote, which might be used to guide investment and locational decisions by the public and private sectors. The planning process will continue into 1973, with target dates set for more precise planning statements, until the final documentation is achieved for a fully integrated physical, economic, and social plan.

We were able to make an inspection trip to Chimbote, to meet with CRYRZA staff there, and to meet (much

too briefly) with a member of the planning team, deputized to explain the program to us. The brevity of the meeting was caused by our time pressures.

Our impressions are necessarily intuitive, but we are fearful that the planning process, orderly and well-organized as it may be, and fast moving by international assistance standards, may not sufficiently direct and control the reconstruction of Chimbote as an urban center. The people there cannot wait. They are busily settling themselves as best they can--in a form which represents the worst urban environment we have seen since leaving India. CRYRZA has apparently taken little positive action to influence their locational decisions, and can anticipate great difficulties in subsequent efforts to use either persuasion or police power to change the land-use decisions now being fixed. The organization is waiting for the planners, and the planners are waiting for the full quantity of data and thoughtful consideration which they believe professionally must go into their work. If the time schedule proposed in the U.N.'s plan of operations is met, an on-going and permanent planning and implementation agency will not be in place in Chimbote until the second half of 1972.

We believe that the Chimbote experience should be followed closely by observers concerned with international

assistance to urban planning, and that its results should be fully and impartially reported when the mission terminates and its contribution to the Chimbote urban environment can be fairly judged.

SOME FINAL OBSERVATIONS

The ultimate development of Peru as an organic nation, in which its urban and rural sectors will form a mutually supporting society, will determine the spatial distribution of its people, the quality of their environment, and the standards of their life. The growth of population, which projects a nation of twenty-five million in 1990, and the growth of the economy are beyond our brief and beyond our expertise. Peru's urban future will be a reaction to them, rather than an impetus. Ideally, the rate of population increase should slow down and the rate of economic growth should rise, in which case--with energy and forethought--Lima would be able to cope with its problems and other urban centers would develop according to sound principles of regional and urban planning.

We can hope! And we would argue that Peru has met its problems of the last three decades with more success than one would have predicted thirty years ago.

The country's geography and history present Peru with special difficulties. The Sierra, which is the country's traditional heartland, is high, poor, and overpopulated in relation to resources. The Selva has never been developed, and there may be very good reasons why it cannot be productive in terms of present and future expectations. The coast is a desert with narrow valleys, requiring investment in and development of managed water resources.

In the Sierra, Peru may have its equivalent of Appalachia, a district which cannot compete within the framework of the national economy, and whose principal export will be people--with at least the theoretical possibility that the most energetic and innovative will be drawn off to urban centers. The people of the Sierra also belong to a different culture and speak a different language. Peru's Indian population has been identified by Julio Cotler, a distinguished sociologist, as the nation's sharpest example of dependencia. We found no evidence, however, that the "minority" problems of a country where as many as 30 per cent of the people do not speak Spanish created special urban problems. There appear to be no Indian ghettos, and in the urban milieu, the Indian culture disappears. Assimilation appears to be complete.

Peru has an activist government, which has proposed a

whole new range of laws and programs. These include:

- A new general law on industries, and a law encouraging worker participation;
- A law on agrarian reform;
- A series of laws relating to urban land, including powers of expropriation; and
- A program for the reform of Peruvian education.

Together, these are "radical" proposals which, in the months and years to come, will have significant effects on the structure of Peruvian society. It will be important to review them--and the actual degree to and manner in which they are executed--in following the course of urban and regional development in Peru.